

TDMS No. 99037 - 05
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: RATS/F 344/N

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**
alpha/beta Thujone mixture
CAS Number: THUJONEMIXAB

Date Report Requested: 05/28/2009
Time Report Requested: 08:41:38
First Dose M/F: 06/09/03 / 06/09/03
Lab: SRI

F1_R2

C Number: C99037B
Lock Date: 11/20/2006
Cage Range: ALL
Date Range: ALL
Reasons For Removal: ALL
Removal Date Range: ALL
Treatment Groups: Include ALL
Study Gender: Both
TDMSE Version: 2.1.0

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Species/Strain: RATS/F 344/N

Lab: SRI

FISCHER 344 RATS MALE	0 MG/KG	12.5 MG/KG	25 MG/KG	50 MG/KG
Disposition Summary				
Animals Initially in Study	50	50	50	50
Early Deaths				
Dosing Accident	2		1	
Moribund Sacrifice	14	21	13	1
Natural Death	7	4	19	49
Survivors				
Natural Death	1			
Terminal Sacrifice	26	25	17	
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Esophagus	(50)	(50)	(50)	(50)
Hemorrhage	1 [2.0]			
Hyperkeratosis				1 [2.0]
Inflammation, Acute	2 [3.0]			
Perforation	1			
Intestine Large, Cecum	(48)	(48)	(40)	(39)
Edema	1 [4.0]			
Inflammation, Acute	1 [2.0]			
Necrosis, Lymphoid				1 [1.0]
Intestine Large, Colon	(44)	(47)	(33)	(15)
Edema	2 [3.0]	1 [2.0]	1 [2.0]	
Hemorrhage			1 [1.0]	
Necrosis			1 [2.0]	
Intestine Large, Rectum	(46)	(48)	(41)	(42)
Inflammation, Chronic				1 [2.0]
Intestine Small, Duodenum	(48)	(48)	(37)	(33)
Necrosis, Lymphoid				1 [1.0]
Intestine Small, Ileum	(43)	(47)	(30)	(16)
Inflammation, Acute			1 [1.0]	1 [1.0]
Inflammation, Chronic Active	1 [2.0]			
Necrosis	1 [1.0]	1 [1.0]		
Intestine Small, Jejunum	(43)	(47)	(33)	(25)
Liver	(50)	(50)	(50)	(50)
Basophilic Focus	29	26	25	4

a - Number of animals examined microscopically at site and number of animals with lesion

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FISCHER 344 RATS MALE	0 MG/KG	12.5 MG/KG	25 MG/KG	50 MG/KG
Clear Cell Focus	19	23	11	4
Degeneration, Cystic	13 [1.4]	7 [1.4]	4 [1.5]	2 [1.0]
Eosinophilic Focus	6	4	4	1
Fibrosis				1 [1.0]
Hematopoietic Cell Proliferation		1 [1.0]		
Hepatodiaphragmatic Nodule	8	3	5	3
Infiltration Cellular, Mixed Cell	21 [1.1]	22 [1.3]	18 [1.1]	9 [1.1]
Mixed Cell Focus	3	6	3	2
Necrosis, Focal		1 [1.0]		3 [1.7]
Thrombosis		1		
Bile Duct, Hyperplasia	41 [2.3]	45 [2.6]	40 [2.4]	20 [2.1]
Centrilobular, Necrosis		1 [4.0]	1 [4.0]	5 [2.8]
Hepatocyte, Vacuolization Cytoplasmic	7 [2.3]	10 [2.6]	4 [3.0]	1 [1.0]
Hepatocyte, Vacuolization Cytoplasmic, Focal		2 [1.0]	1 [1.0]	1 [1.0]
Kupffer Cell, Pigmentation		4 [1.8]		
Mesentery	(11)	(10)	(11)	(4)
Accessory Spleen		1	1	2
Hemorrhage			1 [4.0]	1 [4.0]
Fat, Necrosis	10 [2.4]	9 [1.9]	8 [2.1]	1 [2.0]
Oral Mucosa	(0)	(1)	(0)	(1)
Pancreas	(50)	(50)	(50)	(50)
Atrophy	29 [1.7]	35 [1.9]	30 [1.8]	18 [1.8]
Cyst	21	25	15	6
Hemorrhage				1 [2.0]
Necrosis		1 [3.0]		1 [1.0]
Acinus, Hyperplasia, Focal	8 [1.8]	1 [1.0]	6 [2.5]	
Salivary Glands	(50)	(50)	(50)	(50)
Atrophy	7 [1.1]	4 [1.8]	9 [1.3]	
Hyperplasia				1 [1.0]
Inflammation, Acute	1 [1.0]		1 [2.0]	
Inflammation, Chronic		2 [1.5]		
Necrosis				1 [3.0]
Duct, Hyperplasia	1 [1.0]			
Stomach, Forestomach	(50)	(50)	(50)	(49)
Edema	2 [3.0]	4 [2.3]	1 [4.0]	
Erosion	1 [1.0]			
Inflammation, Chronic Active			1 [2.0]	
Stromal Hyperplasia				1 [3.0]
Ulcer	1 [4.0]	3 [2.7]	2 [4.0]	

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FISCHER 344 RATS MALE	0 MG/KG	12.5 MG/KG	25 MG/KG	50 MG/KG
Epithelium, Hyperplasia	9 [2.3]	12 [2.2]	13 [1.7]	3 [2.0]
Stomach, Glandular	(50)	(50)	(49)	(48)
Cyst		1		
Edema		2 [2.0]	1 [3.0]	
Erosion	3 [1.0]	6 [1.7]	6 [2.0]	1 [2.0]
Hemorrhage				2 [1.0]
Inflammation		1 [1.0]		
Necrosis, Lymphoid				2 [2.0]
Ulcer	2 [3.0]	5 [2.6]	2 [3.0]	
CARDIOVASCULAR SYSTEM				
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	44 [1.4]	41 [1.4]	47 [1.4]	45 [1.3]
Hemorrhage				2 [2.0]
Hypertrophy		1 [2.0]		
Thrombosis	3	4	2	
Epicardium, Inflammation		1 [1.0]		
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(50)	(49)	(50)
Accessory Adrenal Cortical Nodule	21 [1.3]	19 [1.2]	21 [1.5]	4 [1.0]
Degeneration, Fatty	26 [1.5]	28 [1.7]	31 [1.5]	34 [1.2]
Hematopoietic Cell Proliferation	2 [1.0]	2 [1.5]		
Hyperplasia, Focal	17 [1.4]	11 [1.4]	9 [1.8]	4 [1.3]
Hypertrophy, Focal	6 [2.0]	2 [1.5]		
Necrosis	1 [1.0]	3 [1.3]	1 [2.0]	2 [1.5]
Bilateral, Necrosis	1 [4.0]			
Capsule, Hyperplasia	1 [2.0]		1 [1.0]	
Adrenal Medulla	(50)	(50)	(49)	(49)
Hyperplasia	18 [1.8]	25 [1.9]	13 [2.2]	1 [3.0]
Infiltration Cellular, Lymphocyte		2 [1.0]		
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia	3 [1.3]		3 [3.0]	1 [3.0]
Parathyroid Gland	(48)	(49)	(47)	(49)
Hyperplasia, Focal		1 [2.0]	1 [2.0]	
Pituitary Gland	(50)	(50)	(50)	(47)
Infiltration Cellular, Histiocyte			1 [4.0]	

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Pigmentation	7 [1.4]	7 [1.9]	10 [2.0]	1 [1.0]
Pars Distalis, Angiectasis	2 [2.0]	2 [1.5]	1 [2.0]	3 [1.7]
Pars Distalis, Cyst	6	3	4	2
Pars Distalis, Hemorrhage				2 [2.5]
Pars Distalis, Hyperplasia, Focal	16 [1.9]	13 [1.8]	3 [1.3]	5 [2.6]
Pars Distalis, Necrosis				1 [4.0]
Pars Distalis, Pars Intermedia, Necrosis				1 [4.0]
Pars Intermedia, Angiectasis		4 [2.5]	1 [1.0]	1 [1.0]
Pars Intermedia, Cyst	4		1	
Pars Intermedia, Hyperplasia, Focal	2 [1.5]	1 [1.0]		
Rathke's Cleft, Cyst		2		
Thyroid Gland	(46)	(48)	(42)	(45)
Degeneration, Cystic	7 [1.1]	6 [1.0]	4 [1.0]	7 [1.3]
Ultimobranchial Cyst	2 [1.5]	2 [1.0]	1 [1.0]	2 [1.5]
C-cell, Hyperplasia	2 [2.5]	7 [2.4]	2 [3.0]	
Follicular Cell, Hyperplasia, Focal		2 [2.5]	1 [2.0]	1 [4.0]
GENERAL BODY SYSTEM				
Tissue NOS	(1)	(1)	(2)	(0)
GENITAL SYSTEM				
Epididymis	(50)	(50)	(50)	(50)
Granuloma Sperm		1 [2.0]		
Penis	(0)	(1)	(0)	(1)
Inflammation, Acute		1 [2.0]		
Preputial Gland	(49)	(49)	(50)	(50)
Cyst	1			
Hyperplasia	2 [2.5]		1 [3.0]	
Inflammation, Chronic	13 [2.5]	19 [2.1]	18 [2.2]	5 [2.2]
Necrosis		1 [4.0]		
Prostate	(50)	(50)	(50)	(50)
Fibrosis	1 [2.0]		1 [2.0]	
Inflammation, Chronic	32 [1.8]	20 [2.1]	23 [2.3]	9 [2.0]
Mineralization		1 [2.0]		
Necrosis		1 [3.0]	1 [4.0]	
Epithelium, Hyperplasia	23 [1.3]	17 [1.6]	18 [1.3]	4 [1.5]
Seminal Vesicle	(50)	(50)	(50)	(50)

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FISCHER 344 RATS MALE	0 MG/KG	12.5 MG/KG	25 MG/KG	50 MG/KG
Hyperplasia		1 [2.0]		
Infiltration Cellular				1 [4.0]
Inflammation, Acute		1 [4.0]	1 [1.0]	1 [1.0]
Inflammation, Chronic		1 [3.0]		
Necrosis		1 [3.0]		
Testes	(50)	(50)	(50)	(50)
Germinal Epithelium, Atrophy	5 [2.2]	2 [3.5]	3 [2.7]	4 [3.5]
Interstitial Cell, Hyperplasia	9 [1.3]	5 [1.6]	6 [1.7]	13 [1.7]
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(50)	(50)	(50)
Hyperplasia	7 [2.6]	7 [2.7]	12 [2.3]	4 [1.8]
Myelofibrosis	5 [1.6]	4 [2.0]		
Necrosis		1 [2.0]		
Thrombosis		1		
Lymph Node	(12)	(14)	(12)	(5)
Mediastinal, Ectasia	1 [3.0]			
Mediastinal, Hemorrhage	2 [3.0]			1 [1.0]
Mediastinal, Hyperplasia, Lymphoid	1 [2.0]	1 [4.0]	3 [3.0]	1 [2.0]
Mediastinal, Pigmentation			1 [3.0]	
Pancreatic, Hemorrhage	1 [1.0]			1 [4.0]
Pancreatic, Hyperplasia, Lymphoid		1 [2.0]		3 [2.0]
Pancreatic, Necrosis, Lymphoid				1 [1.0]
Pancreatic, Pigmentation	1 [1.0]			1 [2.0]
Lymph Node, Mandibular	(2)	(0)	(0)	(3)
Congestion				1 [2.0]
Hyperplasia, Lymphoid				1 [2.0]
Lymph Node, Mesenteric	(50)	(49)	(50)	(50)
Ectasia	1 [3.0]	1 [4.0]	1 [2.0]	
Hemorrhage	4 [1.3]	2 [1.0]	10 [1.6]	10 [1.3]
Hyperplasia, Lymphoid	1 [2.0]	3 [2.3]	7 [2.1]	7 [2.3]
Necrosis		1 [2.0]	2 [2.0]	1 [2.0]
Spleen	(50)	(50)	(49)	(48)
Accessory Spleen				1
Angiectasis	1 [4.0]			
Fibrosis	2 [2.0]	3 [3.0]	1 [2.0]	
Hematopoietic Cell Proliferation	6 [2.2]	7 [2.9]	1 [4.0]	1 [2.0]
Hemorrhage	1 [3.0]			

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FISCHER 344 RATS MALE	0 MG/KG	12.5 MG/KG	25 MG/KG	50 MG/KG
Infarct	1 [3.0]	1 [4.0]	1 [3.0]	
Necrosis		1 [2.0]	2 [3.0]	3 [1.0]
Pigmentation	19 [2.0]	24 [1.5]	30 [2.1]	46 [2.2]
Lymphoid Follicle, Atrophy		1 [1.0]	2 [2.0]	1 [2.0]
Lymphoid Follicle, Hyperplasia	10 [1.6]	12 [1.6]	8 [1.6]	3 [1.7]
Thymus	(44)	(45)	(45)	(47)
Cyst		1		
Ectopic Parathyroid Gland			1 [1.0]	
Fibrosis		1 [3.0]		
INTEGUMENTARY SYSTEM				
Mammary Gland	(50)	(50)	(50)	(50)
Angiectasis		1 [3.0]		
Cyst	3	1	2	2
Fibrosis	1 [3.0]			
Hyperplasia	22 [2.0]	26 [1.6]	34 [1.7]	29 [1.4]
Skin	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion		2	4	
Edema				1 [2.0]
Hemorrhage				1 [2.0]
Hyperkeratosis	1 [2.0]	3 [3.0]	5 [2.8]	1 [2.0]
Inflammation, Granulomatous	1 [4.0]			
Inflammation, Chronic			4 [2.3]	3 [1.7]
Mineralization			1 [2.0]	
Necrosis			1 [3.0]	
Ulcer				2 [3.5]
Ulcer, Multiple				1 [3.0]
Epidermis, Hyperkeratosis	1 [4.0]			
Epidermis, Hyperplasia		1 [2.0]	3 [2.7]	
Epidermis, Hyperplasia, Focal	1 [3.0]			
Hair Follicle, Cyst		1		
Subcutaneous Tissue, Fibrosis			1 [1.0]	
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Femur, Osteopetrosis		2 [2.0]	2 [2.0]	
Skeletal Muscle	(2)	(4)	(2)	(0)

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FISCHER 344 RATS MALE	0 MG/KG	12.5 MG/KG	25 MG/KG	50 MG/KG
Fibrosis		2 [3.5]		
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Compression	9	4	12	1
Mineralization			1 [2.0]	1 [2.0]
Necrosis				2 [2.5]
RESPIRATORY SYSTEM				
Lung	(50)	(50)	(50)	(50)
Infiltration Cellular, Histiocyte	31 [1.1]	43 [1.0]	33 [1.1]	18 [1.0]
Inflammation, Chronic	1 [1.0]	6 [1.3]	2 [1.5]	4 [1.5]
Metaplasia, Osseous	2 [1.0]	5 [1.4]	6 [1.2]	2 [1.5]
Thrombosis				1
Alveolar Epithelium, Hyperplasia	11 [1.7]	17 [1.2]	19 [1.5]	3 [2.0]
Nose	(50)	(50)	(50)	(50)
Congestion				1 [3.0]
Foreign Body	11 [1.6]	8 [1.8]	9 [1.4]	1 [2.0]
Inflammation, Chronic	13 [1.6]	15 [1.6]	13 [1.7]	2 [1.5]
Goblet Cell, Hyperplasia	2 [1.5]	1 [2.0]	3 [1.7]	1 [2.0]
Respiratory Epithelium, Hyperplasia	13 [1.4]	7 [1.6]	10 [1.6]	1 [1.0]
Trachea	(50)	(50)	(50)	(50)
Inflammation, Acute	1 [3.0]			
SPECIAL SENSES SYSTEM				
Eye	(49)	(50)	(46)	(48)
Cataract	6 [1.3]	9 [1.7]	10 [1.3]	2 [2.5]
Developmental Malformation				1 [3.0]
Edema	1 [3.0]	1 [2.0]		
Hemorrhage		1 [3.0]		
Inflammation, Chronic		2 [2.5]		
Bilateral, Cataract	1 [4.0]	2 [1.5]	2 [1.5]	
Retina, Degeneration	1 [4.0]	2 [3.0]		
Harderian Gland	(50)	(50)	(50)	(50)
Hyperplasia, Focal	1 [3.0]	1 [1.0]		1 [1.0]

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Inflammation, Chronic	3 [1.0]	4 [1.5]	4 [1.0]	5 [1.2]
Pigmentation		1 [4.0]		
Zymbal's Gland	(0)	(1)	(1)	(0)
URINARY SYSTEM				
Kidney	(48)	(48)	(44)	(49)
Casts Granular	1 [3.0]			
Casts Protein	18 [1.1]	30 [1.5]	22 [1.5]	11 [1.6]
Cyst	1	3		
Hydronephrosis	1 [2.0]	1 [3.0]		
Infarct	3 [2.3]	1 [3.0]		
Inflammation, Suppurative		2 [2.5]		1 [1.0]
Mineralization	17 [1.0]	33 [1.4]	41 [1.6]	38 [1.5]
Nephropathy	45 [1.5]	44 [1.7]	41 [1.7]	46 [1.3]
Artery, Thrombosis	1			
Papilla, Necrosis	1 [3.0]			
Renal Tubule, Accumulation, Hyaline Droplet	1 [4.0]			
Renal Tubule, Necrosis				2 [2.5]
Transitional Epithelium, Hyperplasia		1 [1.0]	4 [1.3]	2 [2.5]
Urinary Bladder	(50)	(50)	(49)	(50)
Atrophy		1 [3.0]		
Hemorrhage				1 [1.0]
Inflammation, Acute		1 [4.0]		
Inflammation, Chronic		1 [2.0]		1 [1.0]
Necrosis		1 [4.0]		
Transitional Epithelium, Hyperplasia		1 [1.0]		1 [2.0]

*** END OF MALE ***

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FISCHER 344 RATS FEMALE	0 MG/KG	12.5 MG/KG	25 MG/KG	50 MG/KG
Disposition Summary				
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	6	9	10	5
Natural Death	9	8	21	45
Survivors				
Terminal Sacrifice	35	33	19	
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Esophagus	(50)	(50)	(50)	(50)
Diverticulum	1			
Intestine Large, Cecum	(41)	(44)	(39)	(47)
Hemorrhage		1 [1.0]		
Intestine Large, Colon	(41)	(43)	(33)	(25)
Intestine Large, Rectum	(46)	(45)	(41)	(47)
Hemorrhage				1 [3.0]
Intestine Small, Duodenum	(44)	(45)	(40)	(47)
Necrosis			1 [1.0]	
Necrosis, Lymphoid				1 [1.0]
Intestine Small, Jejunum	(41)	(42)	(33)	(31)
Necrosis, Lymphoid				1 [1.0]
Liver	(50)	(50)	(49)	(50)
Angiectasis	1 [2.0]		1 [2.0]	
Basophilic Focus	46	46	40	12
Clear Cell Focus	17	21	11	
Eosinophilic Focus	8	2	2	
Hematopoietic Cell Proliferation	1 [1.0]	1 [1.0]	4 [1.0]	
Hepatodiaphragmatic Nodule	5	8	6	4
Infiltration Cellular, Histiocyte				1 [2.0]
Infiltration Cellular, Mixed Cell	30 [1.1]	30 [1.3]	32 [1.1]	19 [1.2]
Inflammation, Chronic			1 [1.0]	
Mixed Cell Focus	10	4	4	
Necrosis, Focal	1 [1.0]	1 [1.0]	5 [1.4]	4 [1.5]
Artery, Inflammation		1 [3.0]	1 [3.0]	
Bile Duct, Hyperplasia	4 [1.5]	2 [1.5]	7 [2.0]	

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Species/Strain: RATS/F 344/N

Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/KG	12.5 MG/KG	25 MG/KG	50 MG/KG
Capsule, Fibrosis	1 [3.0]			
Centrilobular, Necrosis			3 [3.3]	
Hepatocyte, Vacuolization Cytoplasmic	5 [3.0]	4 [2.0]	3 [2.7]	
Kupffer Cell, Pigmentation		1 [2.0]	1 [1.0]	
Mesentery	(13)	(11)	(9)	(2)
Accessory Spleen		1	2	1 [2.0]
Necrosis				1 [1.0]
Fat, Necrosis	13 [2.2]	10 [2.3]	8 [2.1]	1 [3.0]
Oral Mucosa	(0)	(2)	(0)	(0)
Inflammation, Chronic Active		1 [4.0]		
Pancreas	(49)	(49)	(50)	(50)
Atrophy	25 [1.4]	24 [1.3]	23 [1.2]	5 [1.2]
Cyst	14	11	9	1
Acinus, Hyperplasia, Focal	2 [1.5]	1 [2.0]	2 [2.5]	
Salivary Glands	(50)	(50)	(50)	(50)
Atrophy	9 [1.1]	10 [1.1]	5 [1.0]	2 [1.0]
Hyperplasia				1 [1.0]
Inflammation, Chronic		1 [2.0]		
Mineralization		2 [1.0]		1 [1.0]
Necrosis				1 [3.0]
Vacuolization Cytoplasmic		1 [3.0]		1 [2.0]
Stomach, Forestomach	(50)	(50)	(50)	(50)
Edema	2 [2.0]	1 [2.0]		
Inflammation, Chronic Active			1 [1.0]	
Ulcer	1 [4.0]	2 [2.5]		
Epithelium, Hyperplasia	7 [1.4]	8 [1.8]	2 [2.0]	
Epithelium, Hyperplasia, Atypical			1 [2.0]	
Stomach, Glandular	(48)	(47)	(48)	(50)
Cyst		1		
Edema	1 [3.0]			
Erosion	1 [1.0]	1 [3.0]	1 [2.0]	3 [2.0]
Ulcer	1 [4.0]		3 [2.3]	1 [2.0]
Tongue	(1)	(3)	(0)	(0)
Hyperplasia	1 [2.0]	2 [2.5]		
Ulcer		1 [4.0]		
Tooth	(0)	(1)	(0)	(0)
Degeneration		1 [2.0]		

CARDIOVASCULAR SYSTEM

a - Number of animals examined microscopically at site and number of animals with lesion

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Test Type: CHRONIC

alpha/beta Thujone mixture

Time Report Requested: 08:41:38

Route: GAVAGE

CAS Number: THUJONEMIXAB

First Dose M/F: 06/09/03 / 06/09/03

Species/Strain: RATS/F 344/N

Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/KG	12.5 MG/KG	25 MG/KG	50 MG/KG
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	40 [1.1]	30 [1.1]	30 [1.2]	8 [1.0]
Hemorrhage				1 [2.0]
Artery, Necrosis				1 [2.0]
ENDOCRINE SYSTEM				
Adrenal Cortex	(47)	(49)	(46)	(50)
Accessory Adrenal Cortical Nodule	7 [1.4]	12 [1.6]	13 [1.3]	9 [1.3]
Degeneration, Fatty	23 [1.9]	18 [1.8]	19 [1.7]	9 [1.3]
Hematopoietic Cell Proliferation	1 [1.0]	2 [1.5]	4 [1.0]	
Hemorrhage			1 [3.0]	3 [2.7]
Hyperplasia, Focal	22 [1.5]	14 [1.7]	9 [1.6]	1 [1.0]
Hypertrophy, Focal	7 [1.7]	6 [1.3]	2 [1.0]	1 [2.0]
Inflammation, Acute				1 [2.0]
Necrosis	2 [2.5]	1 [1.0]	6 [2.7]	4 [2.5]
Adrenal Medulla	(48)	(50)	(48)	(50)
Angiectasis				1 [2.0]
Hyperplasia	7 [1.1]	5 [1.8]	3 [2.0]	
Infiltration Cellular, Lymphoid		1 [1.0]		
Islets, Pancreatic	(49)	(49)	(50)	(50)
Hyperplasia	1 [1.0]		1 [4.0]	
Pituitary Gland	(50)	(49)	(49)	(45)
Infiltration Cellular, Histiocyte				8 [1.6]
Pigmentation	5 [1.6]	5 [1.4]	9 [1.4]	8 [1.4]
Pars Distalis, Angiectasis	9 [2.2]	4 [2.0]	5 [2.2]	2 [1.0]
Pars Distalis, Cyst	18	20	18	8
Pars Distalis, Hyperplasia, Focal	5 [1.6]	13 [2.0]	6 [2.5]	1 [2.0]
Pars Intermedia, Angiectasis	2 [3.5]			
Pars Intermedia, Cyst	1	2	2	2
Pars Intermedia, Hyperplasia	1 [1.0]			
Rathke's Cleft, Cyst			3	14
Thyroid Gland	(42)	(46)	(44)	(50)
Degeneration, Cystic	1 [1.0]	2 [1.0]	5 [1.6]	
Ectopic Thymus				1 [2.0]
Ultimobranchial Cyst	2 [1.0]	1 [1.0]	3 [1.3]	2 [2.0]
C-cell, Hyperplasia	1 [1.0]	11 [2.4]	2 [1.5]	
Follicular Cell, Hyperplasia, Focal		1 [2.0]	1 [1.0]	

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Test Type: CHRONIC

alpha/beta Thujone mixture

Time Report Requested: 08:41:38

Route: GAVAGE

CAS Number: THUJONEMIXAB

First Dose M/F: 06/09/03 / 06/09/03

Species/Strain: RATS/F 344/N

Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/KG	12.5 MG/KG	25 MG/KG	50 MG/KG
GENERAL BODY SYSTEM				
Tissue NOS	(1)	(1)	(0)	(0)
Fat, Mediastinum, Necrosis	1 [2.0]			
GENITAL SYSTEM				
Clitoral Gland	(50)	(50)	(50)	(50)
Cyst	2		1	
Hyperplasia	9 [2.2]	7 [1.9]	11 [2.7]	
Infiltration Cellular, Lymphocyte				1 [2.0]
Inflammation, Chronic			1 [2.0]	1 [1.0]
Ovary	(50)	(50)	(50)	(50)
Cyst	3	6	2	1
Bilateral, Cyst			1	
Uterus	(50)	(50)	(49)	(50)
Cyst	1			
Hyperplasia, Cystic	22 [2.2]	17 [1.8]	19 [2.2]	9 [2.2]
Cervix, Cyst			1	
Fat, Necrosis		1 [2.0]		
Vagina	(2)	(2)	(1)	(0)
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(50)	(50)	(50)
Hyperplasia	4 [3.3]	6 [3.5]	6 [3.5]	
Infiltration Cellular, Histiocyte	1 [4.0]	1 [1.0]	2 [1.0]	4 [1.8]
Myelofibrosis		1 [3.0]		
Necrosis				1 [2.0]
Lymph Node	(7)	(8)	(6)	(7)
Deep Cervical, Hyperplasia		1 [3.0]		
Deep Cervical, Pigmentation		1 [3.0]		
Iliac, Hemorrhage				1 [2.0]
Iliac, Hyperplasia, Lymphoid				1 [2.0]
Iliac, Pigmentation				1 [2.0]
Mediastinal, Hemorrhage		2 [3.0]	2 [2.0]	2 [4.0]
Mediastinal, Hyperplasia, Lymphoid		6 [2.7]	3 [2.0]	2 [2.5]
Mediastinal, Pigmentation		5 [2.2]	1 [2.0]	1 [2.0]
Pancreatic, Hemorrhage		1 [2.0]	2 [3.0]	1 [3.0]

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b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Test Type: CHRONIC

alpha/beta Thujone mixture

Time Report Requested: 08:41:38

Route: GAVAGE

CAS Number: THUJONEMIXAB

First Dose M/F: 06/09/03 / 06/09/03

Species/Strain: RATS/F 344/N

Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/KG	12.5 MG/KG	25 MG/KG	50 MG/KG
Pancreatic, Hyperplasia, Lymphoid			1 [2.0]	4 [2.3]
Pancreatic, Pigmentation		1 [3.0]	1 [2.0]	1 [2.0]
Lymph Node, Mandibular	(1)	(4)	(1)	(4)
Hyperplasia, Lymphoid	1 [1.0]	4 [1.5]		2 [2.5]
Pigmentation		1 [2.0]		
Lymph Node, Mesenteric	(50)	(50)	(48)	(50)
Atrophy	1 [2.0]	1 [3.0]		
Ectasia	1 [3.0]			
Hemorrhage	8 [1.6]	9 [1.7]	6 [1.7]	3 [1.7]
Hyperplasia, Lymphoid	35 [1.5]	42 [1.5]	37 [1.6]	43 [2.3]
Necrosis			1 [1.0]	1 [2.0]
Pigmentation			1 [2.0]	
Spleen	(48)	(49)	(48)	(50)
Ectopic Spleen, Multiple		1		
Fibrosis	1 [3.0]			
Hematopoietic Cell Proliferation	21 [1.4]	31 [1.6]	21 [2.0]	
Hemorrhage	1 [3.0]			
Inflammation		1 [3.0]		
Necrosis		1 [4.0]	3 [2.3]	4 [1.8]
Pigmentation	39 [2.7]	40 [2.6]	39 [2.9]	45 [2.4]
Lymphoid Follicle, Atrophy	2 [1.5]	3 [1.7]	2 [2.5]	2 [2.0]
Lymphoid Follicle, Hyperplasia	3 [1.3]	3 [1.0]	2 [1.0]	8 [2.0]
Lymphoid Follicle, Hyperplasia, Focal			1 [3.0]	
Thymus	(48)	(45)	(50)	(50)
Cyst		2		
Ectopic Parathyroid Gland	1 [2.0]			
Necrosis			1 [1.0]	3 [1.7]
INTEGUMENTARY SYSTEM				
Mammary Gland	(50)	(50)	(50)	(50)
Cyst		1	1	
Fibrosis	1 [4.0]			
Hyperplasia	37 [2.4]	42 [2.5]	32 [2.1]	
Hyperplasia, Focal	4 [1.5]	1 [1.0]		
Malformation			1	
Duct, Ectasia	5 [2.6]	4 [3.3]	4 [2.3]	
Skin	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion	2		1	

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b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Test Type: CHRONIC

alpha/beta Thujone mixture

Time Report Requested: 08:41:38

Route: GAVAGE

CAS Number: THUJONEMIXAB

First Dose M/F: 06/09/03 / 06/09/03

Species/Strain: RATS/F 344/N

Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/KG	12.5 MG/KG	25 MG/KG	50 MG/KG
Hyperkeratosis	1 [4.0]	1 [2.0]	1 [2.0]	
Inflammation, Chronic	1 [1.0]			
Ulcer		1 [4.0]		
Epidermis, Hyperplasia	2 [2.0]	1 [2.0]		
Subcutaneous Tissue, Fibrosis	1 [3.0]			
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Femur, Osteopetrosis	1 [1.0]	1 [2.0]		
Skeletal Muscle	(0)	(0)	(1)	(0)
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Compression	9	10	6	
Mineralization	1 [2.0]		1 [2.0]	
Pigmentation			2 [1.0]	
Pigmentation, Hemosiderin				1 [2.0]
RESPIRATORY SYSTEM				
Lung	(50)	(50)	(50)	(50)
Hemorrhage				1 [4.0]
Hyperplasia		1 [2.0]		
Infiltration Cellular, Histiocyte	46 [1.0]	43 [1.0]	36 [1.1]	8 [1.0]
Inflammation, Suppurative		1 [2.0]		
Inflammation, Chronic	10 [1.5]	3 [1.3]	5 [1.0]	1 [1.0]
Metaplasia, Osseous		1 [1.0]	2 [1.5]	
Necrosis				1 [3.0]
Alveolar Epithelium, Hyperplasia	23 [1.3]	25 [1.4]	17 [1.3]	4 [1.0]
Nose	(50)	(50)	(50)	(50)
Congestion				2 [2.5]
Foreign Body	7 [1.3]	5 [2.0]	3 [1.3]	1 [1.0]
Inflammation, Chronic	11 [1.5]	11 [1.8]	9 [1.4]	1 [1.0]
Thrombosis	1			
Goblet Cell, Hyperplasia	1 [1.0]			
Nasolacrimal Duct, Cyst				1

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Test Type: CHRONIC

alpha/beta Thujone mixture

Time Report Requested: 08:41:38

Route: GAVAGE

CAS Number: THUJONEMIXAB

First Dose M/F: 06/09/03 / 06/09/03

Species/Strain: RATS/F 344/N

Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/KG	12.5 MG/KG	25 MG/KG	50 MG/KG
Respiratory Epithelium, Hyperplasia	5 [1.0]	4 [2.3]	2 [1.5]	
SPECIAL SENSES SYSTEM				
Eye	(44)	(47)	(41)	(49)
Cataract		5 [2.2]	2 [3.0]	
Edema		1 [2.0]	2 [2.5]	
Hemorrhage	1 [3.0]	1 [4.0]		
Inflammation, Acute		1 [2.0]		
Inflammation, Chronic	1 [2.0]	1 [1.0]		
Synechia		1 [3.0]		
Bilateral, Cataract			1 [2.0]	
Bilateral, Edema		1 [4.0]		
Bilateral, Retinal Detachment		1 [4.0]		
Retina, Degeneration		1 [3.0]	2 [2.5]	1 [2.0]
Harderian Gland	(50)	(50)	(49)	(50)
Hemorrhage			4 [2.0]	
Hyperplasia			1 [3.0]	
Inflammation, Chronic	9 [1.0]	11 [1.2]	9 [1.3]	6 [1.5]
URINARY SYSTEM				
Kidney	(44)	(45)	(40)	(50)
Casts Protein	14 [1.4]	8 [1.3]	12 [1.3]	
Cyst	1	1		
Infarct	2 [2.5]	1 [4.0]	1 [4.0]	
Inflammation, Suppurative	1 [2.0]			
Inflammation, Chronic		1 [3.0]	3 [2.0]	
Mineralization	16 [1.1]	24 [1.0]	17 [1.2]	8 [1.0]
Nephropathy	33 [1.2]	36 [1.0]	26 [1.0]	4 [1.0]
Renal Tubule, Accumulation, Hyaline Droplet	2 [2.0]	5 [2.0]	4 [2.8]	
Renal Tubule, Necrosis			1 [1.0]	
Transitional Epithelium, Hyperplasia	2 [2.0]	1 [2.0]		
Urinary Bladder	(50)	(50)	(50)	(50)
Inflammation, Chronic				1 [1.0]
Transitional Epithelium, Hyperplasia		1 [2.0]		

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TDMS No. 99037 - 05

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344/N

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]
alpha/beta Thujone mixture
CAS Number: THUJONEMIXAB

Date Report Requested: 05/28/2009

Time Report Requested: 08:41:38

First Dose M/F: 06/09/03 / 06/09/03

Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/KG	12.5 MG/KG	25 MG/KG	50 MG/KG
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*** END OF REPORT ***

a - Number of animals examined microscopically at site and number of animals with lesion
b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)